SECRET IMMEDIATE

OUT63556

1967 NOV 9 20 23Z

SECRET 211

PASS TO SPO ATTN:

REF 2162, 3 NOVEMBER 1967

1. SUBJECT: VALUE FUNCTION ANALYSIS

2. UNDERSTAND VERBALLY FRO TODAY NO LONGER DESIRES VALUE FUNCTION ANALYSIS AS PART OF NICE GIRL EFFORT. SUBSEQUENT WORK USING THIS TECHNIQUE WOULD BE SEPARATE ACTIVITY TO SUPPORT SUGGESTION IN HIS LETTER OF 13 OCTOBER. PLEASE BE GUIDED ACCORDINGLY.

3. HOWEVER, QUERY TO 115-A MANUFACTURER INDICATES POSSIBILITY OF PROVIDING DATA NOTED IN REFERENCE BY TIME NEEDED.

4. 115-A MANUFACTURER PROVIDED INPUT PARAMETERS THEY INTEND TO USE, FOR YOUR INFO IN PARA 6 BELOW.

5. ADVISABILITY OF PURSUING MATTER FURTHER WITH 115-A MANUFACTURER WITH RESULTANT SIGNIFICANT MANPOWER AND COST EXPENDITURES DEPENDS TO LARGE EXTENT ON AVAILABILTY OF SIMILAR INFO AND DATA USING ESSENTIALLY SAME INPUT PARAMETERS FROM SR-71 CAMERA MANUFACTURERS. CAN YOU ADVISE PROSPECTS AT THIS TIME?

6. INPUT PARAMETERS REFERENCED IN PARA 4 ABOVE:

A. AVERAGE TARGET BRIGHTNESS 600 FOOT LAMBERTS

B. TRI-BAR TARGET CONTRAST 2:1 (AT ENTRANCE PUPIL).

C. FILTER FACTOR (WRATTEN 12) EQUALS 1.5

D. EXPOSURE TIME

T EQUALS 4P(T)SQ/(10.76) (B) (2EI) EQUALS SECS

T EQUALS EXPOSURE TIME SECONDS

P EQUALS FILTER FACTOR

B EQUALS AVERAGE SCENE BRIGHTNESS FOR BLACKBODY RADIATION AT 6000 K DEGREES

EI EQUALS FILM EXPOSURE INDEX EQUALS 3.6 (EK 3404)

T EQUALS T NUMBER FOR THE OPTICAL SYSTEM.

E. AIM CURVE

SPATIAL FREQUENCY	RESOLVABLE MODULATION
50	.020
70	.030
100	.046
150	.074
200	.107

AVERAGE EXPOSURE EQUALS 0.139 METER CANDLE SECONDS.

F. POLYCHROMATIC OPTICAL TRANSFER FUNCTION WILL BE BASIS FOR THE PERFORMANCE ANALYSIS. ALL ERRORS TWO SIGMA VALUES. RESOLUTION (K, SPATIAL FREQUENCY IN LINES PER MILLIMETER) WILL BE STATED AS THE GEOMETRIC MEAN OF THE RESOLUTIONS IN THE X AND Y DIRECTIONS AND WILL BE REPORTED FOR THE 96 PERCENT PROBABILITY LEVEL. A MONTE CARLO METHOD OF COMPUTATION WILL BE USED.

G. WINDOW BOUNDARY LAYER (GAUSSIAN)

SIGMA EQUALS 83.3X(10 TO THE MINUS 6) DI 0.2 MXM/DO (1 PLUS 0.2MXM) RADIANS (SUPERSONIC)

DI/DO EQUALS RATIO OF FREE STREAM TO GROUND DENSITY OF AIR. M EQUALS MACH NO.

H. VEHICLE VIBRATION SPECTRUM.

SPECTRUM IN ACCORDANCE WITH TYPE I SPEC. BOOK. (AVAILABLE SECTION 1.2.2, PAGE 2

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GROUP 1 Excluded from automatic downgrading and declassification

SECRET

I. VEHICLE ATTITUDE AND RATE ERROR (FOR STRAIGHT AND LEVEL FLIGHT AND COORDINATED TURNS).
PITCH PLUS OR MINUS 15 MIN.
ROLL PLUS OR MINUS 15 MIN.
AZIMUTH PLUS OR MINUS 23 MIN.
ANGULAR PETURBATIONS

	RATE		PERIOD	MAX AMPL
PITCH	6-11 MR/SEC		3-5 SEC	0.286 DEG
ROLL	3-5 MR/SEC		6-10 SEC	0.286 DEG
YAW	0.8-1.2 MR/SEC	N	6-10 SEC	0.071 DEG

J. VEHICLE TURN RATE AND ALTITUDE TURN RATE EQUALS 0.00763 RAD/SEC
ALTITUDE EQUALS 78000 FEET
(BANK ANGLE EQUALS 35 DEG.)

S E C R E T

25X1

-- END OF MESSAGE --

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